

AMENDMENTS TO THE CLAIMS (THIS LISTING REPLACES ALL PRIOR LISTINGS):

Claims 1-24. (Canceled).

25. (New) An apparatus comprising:

a piezoelectric substrate comprising at least one transducer electrode structure comprising:

a metallization formed by one or more metals, the one or more metals having a mean specific density that is at least 50% higher than that of aluminum; and

a compensation layer applied fully or partially over the metallization, the compensation layer being of a material having a temperature dependence of elastic constants that substantially counteracts a temperature coefficient of frequency of the substrate, the compensation layer having a thickness that is less than 15% of an acoustic wavelength of a wave capable of propagation in the structure.

26. (New) The apparatus of claim 25, wherein the elastic constants of the metallization have less temperature dependency than elastic constants of aluminum.

27. (New) The apparatus of claim 25, wherein the metallization comprises one or more of the following: copper, molybdenum, tungsten, gold, silver and platinum.

28. (New) The apparatus of claim 25, wherein the compensation layer comprises SiO₂.

29. (New) The apparatus of claim 25, wherein the metallization comprises copper or a copper alloy and has a thickness of 6 to 14% h/λ .

30. (New) The apparatus of claim 25, wherein the compensation layer has a thickness of 4 to 10% h/λ .

31. (New) The apparatus of claim 25, wherein the substrate comprises lithium tantalate with a rotated cut.

32. (New) The apparatus of claim 25, wherein the substrate comprises lithium tantalate with a rotated cut and an angle of intersection of between 30 and 48°.

33. (New) The apparatus of claim 25, wherein the substrate comprises lithium niobate.

34. (New) The apparatus of claim 25, wherein the substrate comprises quartz.

35. (New) The apparatus of claim 25, further comprising an adhesive layer beneath the metallization.

36. (New) The apparatus of claim 35, wherein the adhesive layer comprises one or more of the following: aluminum, molybdenum, titanium, tungsten, chromium, and nickel.

37. (New) The apparatus of claim 35, wherein the adhesive layer has a thickness of 1 to 7 nm.

38. (New) The apparatus of claim 25, wherein the compensation layer comprises SiO_2 with a refractive index of between 1.43 and 1.49.

39. (New) The apparatus of claim 25, wherein the temperature coefficient of frequency is less than 20 ppm/K.

40. (New) The apparatus of claim 25, further comprising a passivation layer that is thinner than the compensation layer, the passivation layer being beneath the compensation layer.

41. (New) The apparatus of claim 25, wherein the apparatus comprises a multiport filter.

42. (New) The apparatus of claim 25, wherein the apparatus comprises a reactance filter.

43. (New) The apparatus of claim 25, wherein the apparatus comprises a dual mode surface acoustic wave filter.

44. (New) The apparatus of claim 25, wherein the apparatus comprises a single phase uni-directional transducer filter.

45. (New) The apparatus of claim 25, wherein the apparatus comprises a duplexer.

46. (New) The apparatus of claim 25, wherein the apparatus comprises a diplexer.

47. (New) The apparatus of claim 25, wherein the apparatus comprises a 2-in-1 filter.